

**SPECIAL HANDLING**

Jim  
COR-0603  
COPY 1 OF 3

11 September 1959

Dear Jim:

As a result of the meeting held in our facility on 26 August 1959 and attended by yourself, [redacted] and the undersigned, we are submitting herewith revised cost estimates covering two (2) programs in accordance with your instructions. These revised cost estimates cover the same program as proposed in our submission on 14 July 1959 to BMD.

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Included in these proposals are the pertinent items discussed by [redacted] regarding the training requirements and programming needs to accomplish integration of the Itek Viewers with existing equipment.

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Our estimated costs, summarized in two (2) parts, are based upon the following conditions:

1. Issuance of a cost-plus-fixed fee contract.
2. Inspection and acceptance of equipment at Contractor's plant.
3. Delivery of equipment FOB Contractor's plant.
4. Handbooks will be prepared in accordance with acceptable commercial standards and will be delivered 45 days after delivery of equipment.
5. Authorization for use on a no-charge basis facilities at Contractor's plant covered by AF Facilities Contract AF 33(600)-38172.
6. The equipment will be designed and fabricated to contractor specifications.
7. The computer programming service contemplates the use of a maximum of [redacted] people for a period of approximately nine (9) months starting with the date of the contract.
8. With reference to the programming service it will be necessary to subcontract to the Vidya Corporation, a Division of Itek, and it may be necessary to subcontract to [redacted] at some later date in order to provide greater flexibility and better service to your organization.
9. Delivery of the viewers on Schedule I will be made as follows:
  1. The first viewer will be delivered six (6) months from the date of the contract.

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USAF review(s) completed.

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2. The second and third viewers will be delivered at the end of the seventh month.

3. The fourth and fifth viewers will be delivered at the end of the eighth month.

10. Delivery of the Viewers on Schedules II and III will be made as follows:

1. Schedule II will be delivered nine (9) months after date of contract.

2. The first two (2) viewers on Schedule III will be delivered ten (10) months after date of contract.

3. The second two (2) viewers on Schedule III will be delivered eleven (11) months after date of contract.

11. There shall be included as allowable indirect costs through overhead such contractor general research costs as are deemed reasonable and where the research performed is within the fields of interest of the Government. These costs shall not exceed  per cent of the contractor's sales for each fiscal year.

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For the "Training Program," Itek recognizes that in order for the user to obtain a maximum benefit from the various equipments and services supplied to the customer under other phases, reasonable personnel training and services are required. Therefore, Itek proposes a training program in two (2) phases, first, the phase covering maintenance training at the contractor's plant, and second, the Operational and Techniques Application training programs at the user's facility. Our estimated cost schedules for these three (3) training programs are enclosed and cover the training of the user's personnel, on the job and/or in classes of approximately twenty-five (25) or less.

The maintenance training program will be conducted during the last thirty (30) days preceding delivery of the equipment. The estimated cost schedule on this item reflects the costs for the training at the contractor's plant, however, if further training classes are needed at the user's facility this cost will increase to a monthly estimated cost of  due to the travel necessary for the instructors.

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An Operational training program will be conducted in Omaha over a period of thirty (30) days subsequent to the delivery of the equipment. This will cover the on the job training of personnel at the user's facility in the operation of the actual equipments delivered.

A Techniques Application training program will be conducted in Omaha covering a period of ninety (90) to one hundred twenty (120) days

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subsequent to the Operational training program. This program includes classroom instruction and on the job training in the various programs developed, that integrate this equipment with other photo-interpretive equipment of the user, i.e. mensuration viewers, alwac computer, BL plotter, etc., into a true operating system.

In reference to additional training for the Operational program or the Techniques Application program, it is felt that a team of three (3) Itek personnel consisting of two (2) engineers and one (1) Senior Technician will be necessary to provide the services at an estimated cost of approximately [ ] per month.

We are also enclosing a copy of our original proposal which was submitted to [ ] at [ ] [ ] Information as to the sharing of costs on the design and engineering of the viewers is contained therein. I believe you will find the attached estimated cost schedules are consistent with our original proposal with the exception of minor material costs which have been included in the Operational and Techniques Application training programs for the purpose of covering training aids and maintenance of the equipment during the training program. This particular item had not been discussed with BMD however, we did discuss this per our last telephone conversation. If any questions develop because of this slight increase we would be happy to discuss this with you. If further information on this matter is required, please do not hesitate to contact me.

~~Yours very truly,~~



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some theoretical and some experimental efforts to these problems at their Research Laboratories at Itek. It is understood that complete optical, photographic and mechanical equipment and qualified personnel are available as required to conduct such studies. In addition, studies which have been made in these areas previously, and which are available to Itek or this command, should be considered for their application to the problems outlined above.

Final Report

The final report should include, but not be limited to, the following:

- (1) An evaluation of existing techniques and equipment used to extract intelligence information from aerial photos and corollary information, and recommendations for improving such techniques and equipment.
- (2) Recommendations on means of increasing compatibility between various photographic inputs and special, or general, purpose equipments.
- (3) Recommendations for new research and development projects designed to improve SAC's photo analysis capability.
- (4) Detailed SOP's that will assist SAC reconnaissance technical units to implement recommended techniques.

add/or developed. Human engineering staff members should insure that recommendations are based on sound man-machine matches. Primary consideration should be given to developing techniques which will insure that the optimum amount of intelligence information is extracted from photography through the preservation of original detail and the application of supporting material from the graphic files or provided by other intelligence collection and exploitation systems.

#### Location Phase

This phase should deal directly with the improvement of positional information, which is a vital concern to this command. The program should first determine the responsibility of all contributing organizations, such as that of ACIC, to provide geodetic base information and charts, and should study the accuracy requirements as stated in SAC operational directives. Present and proposed methods, equipment, mathematical techniques, and results should be studied. The means for the best utilization of present equipment, including computer programming and scheduling, should be explored. Methods for improving positional accuracy, both by measurement from original material and by improvement of analytical techniques, should be specified. Statements concerning realistic accuracies, based on equipment errors and other sources of errors, should be included. Methods of extension of location information, using either analog or digital computation, should be explored, and computer programs developed.

#### Pertinent Activities at Itek Corporation

As the team members define problems during the early months of the study it should be possible and desirable to have the Itek Corporation devote

with identification (what is it), and the second with installation location (where is it). Not only must identification and location be accomplished accurately, but there is a constantly increasing pressure to shorten the real time in which such data is prepared. It is recognized that considerable overlap between the identification phase and the positional phase must occur. The program should consider where such overlap is advantageous, and where the operations should be distinct and separate. Manpower and equipment availability will obviously affect such decisions.

It is desired that a team of Itek personnel, who will possess appropriate security clearances, spend a considerable amount of time at the 544th RTGP and the 8 RTS, specifically to examine the photo analysis techniques, problems, equipment and its utilization, and the present operations. The impact of new types of reconnaissance photography, which will include high volumes and various geometries, camera modes, formats, and scales, should be examined. It is also desirable that Itek conduct a review of the existing training programs for Photo Interpreters, and study those pertinent directives which detail the requirements for photo interpreters at the various SAC levels. The filing and retrieval problems for both photo and collateral materials should also be examined as they apply to the photo analyst.

#### Identification Phase

With this as a background, an analysis of the existing methods and techniques and of prototype and proposed new equipment should be made. The objective will be to point out the strengths and weaknesses in the present system, and in what direction research and development must go to strengthen the system. Interfaces between equipments and techniques must be explored

WORK STATEMENT - TECHNIQUES APPLICATION PROGRAM FOR SAC

General

It is desired that the Itek Corporation develop, for SAC reconnaissance technical activities, a techniques application program whose prime purpose will be to enable these activities to improve the productivity of the photo analyst, and the rate and quality of his work, with particular reference to those photo analysis tasks which relate to the specific objectives of the Strategic Air Command. The term "photo analysis" is construed to include photo interpretation, photogrammetry, and other activities concerned in extracting intelligence information from aerial photographs. The contractor should examine in detail the mechanical, physical, and psychological factors which influence the productivity of the SAC operation, and make recommendations thereon. The program should describe in detail how to make the best man-machine match and how to best utilize existing equipment, and should produce recommendations for specific new research and development that will contribute to SAC performance. Photo analysis is an individual effort requiring complex decisions to be made by the interpreter. At the same time, there are many facets of the photo analysis operation that can be made more efficient and accurate through proper equipment design and coordination, and through the application of proper techniques. This will aid the individual to make those decisions which he alone can make, both more rapidly and more accurately. This is the general philosophy that should guide the development of the program.

General Approach

The program must consider two phases of photo analysis: the first dealing



Headquarters, SAC. There shall be no requirement for approval of such discussion or disclosure by the Contracting Officer or his representative for security matters.

d. In order to minimize duplication of effort, Itek Corporation should be directed and authorized to make use of existing studies by industrial or academic agencies in such fields as electronic data processing (438-L, Minicard, etc.), and photo analysis instrumentation and techniques (Ford Instrument Company's "Insite", Aero Service Corporation's "Photo Interpretation Techniques of Small Scale Photography and TV Pictures", etc.).

4. Although not a contractual requirement, it is recommended that Itek Corporation consider [redacted] as a sub-contractor in the computer programming phase. [redacted] owns an Alwac computer and has indicated a willingness to assist in developing programs for SAC use. ✓

5. The development and construction of the maximum capability measurement viewers covered by Schedules II and III should not begin until the techniques application program is complete. This is necessary because a portion of the program is aimed at establishing the requirements and specifications for such equipment.

6. The final report on the techniques application program should be submitted within 120 days after initiation of the contract. Interim reports are required at 30, 60 and 90 days; these may consist of working papers and briefings. The maintenance and operation training programs must be conducted in accordance with the provisions of the Itek letter of 14 July 1959, and Paragraphs 3a and b above.

7. The programming service covered by Schedule V should be initiated concurrently with the development of the techniques application program. This will permit work to start on computer programs as soon as a requirement is established. The period of nine months for the duration of this service, as stated in the Itek letter, should be interpreted as the maximum limit for the delivery of all required computer programs.

FOR THE COMMANDER IN CHIEF:

[redacted]

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Work Statement, 3 cys.